

WHAT IS CLAIMED IS:

1. A pattern formation method comprising the steps of:
forming a resist film made from a resist material including a material of absorbing moisture;
5 performing pattern exposure by selectively irradiating said resist film with exposing light while supplying immersion solution onto said resist film; and
forming a resist pattern by developing said resist film after the pattern exposure.
2. The pattern formation method of Claim 1,
wherein said material of absorbing moisture is hygroscopic compound or a rare
10 earth compound.
3. The pattern formation method of Claim 2,
wherein said hygroscopic compound is ethylene glycol, polyethylene glycol, glycerin or *N*-methyl-2-pyrrolidone.
4. The pattern formation method of Claim 2,
15 wherein said rare earth compound is an oxide, a chloride, a sulfate, a nitrate, a hydroxide, an acetate, an octylate, yttrium oxide, neodymium oxide, cerium oxide, lanthanum oxide, scandium oxide, cerium chloride, ceric sulfate, ammonium ceric sulfate, cerium nitrate, ammonium cerium nitrate, lanthanum nitrate, cerium hydroxide, cerium acetate or cerium octylate.
- 20 5. The pattern formation method of Claim 1,
wherein said exposing light is KrF excimer laser, ArF excimer laser, F₂ laser, KrAr laser or Ar₂ laser.
6. A pattern formation method comprising the steps of:
performing pattern exposure by selectively irradiating a resist film with exposing
25 light while supplying, onto said resist film, immersion solution including a material of

absorbing moisture; and

forming a resist pattern by developing said resist film after the pattern exposure.

7. The pattern formation method of Claim 6,

wherein said material of absorbing moisture is a hygroscopic compound or a rare

5 earth compound.

8. The pattern formation method of Claim 7,

wherein said hygroscopic compound is ethylene glycol, polyethylene glycol, glycerin or *N*-methyl-2-pyrrolidone.

9. The pattern formation method of Claim 7,

10 wherein said rare earth compound is an oxide, a chloride, a sulfate, a nitrate, a hydroxide, an acetate, an octylate, yttrium oxide, neodymium oxide, cerium oxide, lanthanum oxide, scandium oxide, cerium chloride, ceric sulfate, ammonium ceric sulfate, cerium nitrate, ammonium cerium nitrate, lanthanum nitrate, cerium hydroxide, cerium acetate or cerium octylate.

15 10. The pattern formation method of Claim 6,

wherein said immersion solution is supplied by a paddle method, a dip method or a spray method.

11. The pattern formation method of Claim 6,

wherein said exposing light is KrF excimer laser, ArF excimer laser, F₂ laser,

20 KrAr laser or Ar₂ laser.

12. A pattern formation method comprising the steps of:

forming a film including a material of absorbing moisture;

performing pattern exposure by selectively irradiating said resist film with exposing light while supplying immersion solution onto said film; and

25 forming a resist pattern by developing said resist film after the pattern exposure.

13. The pattern formation method of Claim 12,

wherein said material of absorbing moisture is hygroscopic compound or a rare earth compound.

14. The pattern formation method of Claim 13,

5 wherein said film including a rare earth compound is a nonaqueous film.

15. The pattern formation method of Claim 14,

wherein said nonaqueous film is an olefin film.

16. The pattern formation method of Claim 15,

10 wherein said olefin film is a polyethylene film, a polypropylene film or a film of a copolymer of ethylene and propylene.

17. The pattern formation method of Claim 13,

wherein said rare earth compound is an oxide, a chloride, a sulfate, a nitrate, a hydroxide, an acetate, an octylate, yttrium oxide, neodymium oxide, cerium oxide, lanthanum oxide, scandium oxide, cerium chloride, ceric sulfate, ammonium ceric sulfate,
15 cerium nitrate, ammonium cerium nitrate, lanthanum nitrate, cerium hydroxide, cerium acetate or cerium octylate.

18. The pattern formation method of Claim 12,

wherein said exposing light is KrF excimer laser, ArF excimer laser, F₂ laser, KrAr laser or Ar₂ laser.

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